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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/986,084	11/07/2001	Shuji Nakao	57454-248	4719

7590 05/27/2003

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EXAMINER

YOUNG, CHRISTOPHER G

ART UNIT	PAPER NUMBER
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1756

DATE MAILED: 05/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/986,084

Applicant(s)

Nakao et al.

Examiner

Young

Group Art Unit

1756

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE —3— MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 11/7/01
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-9 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-9 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____
- ☐ received in this national stage application from the International Bureau (PCT Rule 1 7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 4
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

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1. This Office action is responsive to the filing of the instant application on November 7, 2001 with attached priority papers (Paper No. 3) and Information Disclosure Statement (Paper No. 4).

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 8 and 9 are rejected under 35 U.S.C. § 102(b) as being anticipated by Japan 6-120116.

The focus monitoring apparatus used for pattern formation of a semiconductor device as claimed is clearly

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described, shown and suggested by the Japanese document. See specifically the Figures and Abstract of the Disclosure.

4. Claims 1-7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Japan 6-120116 in view of King et al.

The broad scope of the protection sought is described, taught and suggested by the Japanese document wherein a best focus position measuring method utilizing a projection optical system is performed without changing the focus position of a photosensitive substrate. A careful review of the Figures and translation show that non-telecentric illumination is utilized to perform focus monitoring of the patterned image of the photomask. A 35 U.S.C. § 102 rejection of anticipation is not being made since it is not clear that the specific types of mask patterns utilized in the instant application are described, shown or suggested by the Japanese document. However, King et al. describes a method of forming a stepper focus pattern through determination of overlay error that is extremely similar to the focus monitoring method of the instant application and that of the Japanese document relied upon by the Examiner. In the document of King et al., it is shown that a box within a box pattern is utilized, with relative displacement of the patterns transferred onto the photoresist to perform focus monitoring. Although King et al. does not describe non-telecentric illumination, one of ordinary skill would have found it prima

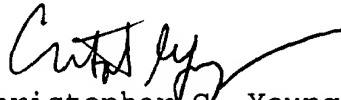
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facie obvious to utilize the best focus measuring method of the Japanese document in combination with the box within a box mark with a reasonable expectation of achieving a highly useful focus measuring method as set forth in the Japanese document absent objective evidence of high probative value to the contrary.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Young, whose telephone number is (703) 308-2984. The examiner can normally be reached on Monday through Friday from 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff, can be reached on (703) 308-2464. A Fax communication that is for a non-final fax should be sent to (703) 872-9310. An after final fax should be sent to (703) 872-9311.

Any inquiry of general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0651.



Christopher G. Young
Primary Examiner
Art Unit 1756

C. Young:cdc
May 23, 2003